Summary of Ozark National Scenic Riverways GRI meeting December 4-6, 2001

Summary
A Geologic Resources Inventory (GRI) workshop was held for Ozark National Scenic Riverways (OZAR) on December 5-6, 2001 to view and discuss the park's geologic resources, to address the status of geologic mapping for compiling both paper and digital maps, and to assess resource management issues and needs. Cooperators from the NPS Geologic Resources Division (GRD), NPS Ozark National Scenic Riverways, United States Geologic Survey (USGS) and Missouri Department of Natural Resources and Soil and Water Conservation Program were present for the workshop.

On Wednesday December 5th, scoping involved a full-day field trip to view the bedrock, surficial and karst geology of the Ozark National Scenic Riverways, led by Randy Orndorff (USGS), and Scott House (OZAR). On Thursday December 6th, another full-day scoping session was conducted to present overviews of the NPS Inventory and Monitoring (I&M) program, the Geologic Resources Division, and the on-going Geologic Resources Inventory (GRI). Round table discussions involving geologic issues for Ozark National Scenic Riverways included interpretation, the status of geological mapping efforts of the USGS and Missouri Department of Natural Resources, sources of available data, cave and karst issues, geologic hazards, and action items generated from this meeting.

Currently, the greatest issue facing park resource management is dealing with the threat of external mineral development and its potential effects on the karst system of the park. Geologic mapping is providing much information about this system and the park desires many of the quadrangles of interest to the park mapped to support resource management.

For a list of meeting attendees, see **Appendix A *(List of Attendees for Geological Resources Inventory Workshop, December 5-6, 2001)***

Geologic Mapping

Both the USGS and Missouri Geological Survey (a.k.a. Department of Natural Resources-GSRAD) have been active in the OZAR area doing geologic mapping. Many of the quadrangles have been mapped (or are planned to be) at *1:24,000* scale. Additionally, there is a USGS OF-97-434 for the Spring Valley sheet (*1:100,000* scale). It is considered only "preliminary", and served as the basis for the need to do larger scale mapping in the region. The larger scale mapping is making major strides to improve upon the Spring Valley sheet.

For the USGS, Randy Orndorff is currently doing the geologic mapping in the area and has numerous quadrangles completed and several more in various stages. During the scoping session, an index of geologic maps (*1:24,000* scale) was developed for quick reference for status. The following is a brief summary of those quadrangles:

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- **Completed by USGS**: Powder Mill Ferry (I-2722), Eminence (I-2653), Greer (I-2618)
- **Completed by Missouri Geological Survey as open file reports** (with both bedrock and surficial delineated): Hunter, Grandin, Grandin SW, Briar, Doniphan North, Big Spring
- **In press by USGS**: Winona (I-2749), Low Wassie
- **In progress by USGS**: Piedmont Hollow (shown as inactive originally on our index maps)
- **Proposed by USGS**: Montauk, Cedargrove, Alley Spring, Jam Up Cave, Pine Crest
- **No status** (these are within park boundary, but no plans as of yet when they will be mapped as individual quadrangle sheets): Gladden, Lewis Hollow, Bartlett, Summersville NE, Exchange, The Sinks

OZAR natural resource managers would like to see the Montauk, Cedargrove, Alley Spring, Pine Crest, and Jam Up Cave quadrangles completed as soon as possible. Additionally, OZAR Deputy Superintendent Chris Ward mentioned that a bridge will be constructed within the Round Spring quadrangle by Federal Highways. They will likely need geologic data to aid in where to site the bridge and to know the underlying geology.

IS THERE A PMIS STATEMENT FOR THE USGS PROJECT ???
OZAR natural resource management staff have submitted PMIS proposal number 36582 entitled "*Conduct Geologic Survey and Publish Geologic Map to Enhance Research and Resource Protection*" as an attempt to produce a geologic map for OZAR. Unfortunately, the proposal has not been funded yet to date.

A scale of *1:24,000* is considered the minimum acceptable scale for any new mapping of the area for its applicability to resource management.

Digital Geologic Map coverage
The USGS is completing digital coverages of the quadrangles they are producing for the OZAR area. These already exist for Greer, Eminence, and Powder Mill Ferry and will soon be published for Winona and Low Wassie. These are available to the general public in ArcInfo and ArcView formats from the USGS.

The Missouri Geological Survey also has digital coverages (ArcView) available for their open file reports for the Hunter, Grandin, Grandin SW, Briar, Doniphan North, and Big Spring quadrangles. These can be obtained by contacting Mark Middendorf.

Randy Orndorff showed edge-matched “paper” maps for the following quadrangles in the south and east portions of OZAR (meaning they have digital files as their base):

Eminence	Powder Mill Ferry		
Winona	Stegall Mountain	Van Buren North	
Low Wassie	Fremont	Van Buren South	Big Spring
Greer	Wilderness	Handy	Grandin SW
East of Greer are MO GS maps			

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Other desired GIS data
Since OZAR does not have a full-time dedicated GIS person at the park, they are dependent on the Midwest Region GIS staff in Madison, Wisconsin for support. The park indicated that they could use their own in-house GIS specialist.

Miscellaneous Items of interest

- Current natural resource staff at Ozark National Scenic Riverways are Victoria Grant, Charlie Putnam and Scott House.

- Jim Vandyke (Missouri Department of Natural Resources) wrote "***Guidebook to the Geology and Hydrology of the Current River Basin***" to describe the geology around OZAR. He might be a good candidate for writing the geologic report for the park. His article may serve as the foundation for our geologic report as well. He is still with the MO DNR.

- OZAR can use university CESU's (cooperative ecosystem study units) in Omaha, Nebraska and Minneapolis, Minnesota for any research they might need from universities.

Appendix A: List of Attendees for Geological Resources Inventory Workshop
December 5-6, 2001

NAME	*AFFILIATION*	*PHONE*	*E-MAIL*	WED 12-5	THU 12-6
Tim Connors	NPS-GRD, Denver CO	303-969-2093	Tim_connors@nps.gov	**X**	**X**
Bruce Heise	NPS-GRD, Denver CO	303-969-2017	Bruce_heise@Nps.gov	**X**	**X**
Bob Higgins	NPS-GRD, Denver CO	303-969-2018	Bob_higgins@nps.gov	**X**	**X**
Sid Covington	NPS-GRD, Denver CO	303-969-2154	Sid_covington@nps.gov	**X**	**X**
Scott House	NPS-OZAR, Resource Management		Scott_house@nps.gov	**X**	**X**
Randall Orndorff	USGS, Reston VA	703-648-4316	Rorndorf@usgs.gov	**X**	**X**
Dennis M. Meinert	DNR Soil and Water Conservation Program	573-860-3700	Nrmeind@mail.dnr.state.mo.us	**X**	**X**
Charles Putnam	NPS-OZAR, Resource Management	573-323-4236, ext. 253	Charles_putnam@nps.gov	**X**	**X**
Victoria Grant	NPS-OZAR, Resource Management	573-323-4236, ext. 229	Victoria_grant@nps.gov	**X**	**X**
Jeff Imes	USGS-WRD, Roll MO	573-308-3671	Jimes@usgs.gov	**X**	**X**
Bill Duley	GSRAD-MO DNR	573-368-2105	Nrduleb@mail.dnr.state.mo.us	**X**	**X**
Mark Middendorf	GSRAD-MO DNR	573-368-2147	Nrmiddm@mail.dnr.state.mo.us	**X**	**X**
Chris Ward	NPS-OZAR	573-323-4236, ext. 223	Chris_ward@nps.gov		**X**
Ron Kerbo	NPS-GRD, Cave Specialist	303-969-2097	Ron_kerbo@nps.gov	**X**	**X**
Bill O'Donnell	NPS-OZAR	573-858-3297	Bill_o'donnell@nps.gov		**X**
Zelda Bailey	NPS, National Cave and Karst Research Institute	303-969-2082	Zelda_bailey@nps.gov	**X**	**X**
Deanna Greco	NPS, GRD	303-969-2351	Deanna_greco@nps.gov	**X**	
Robert Jacobsen	USGS, Columbia MO			**X**	
James Price	NPS, OZAR, Archeologist		James_e_price@nps.gov		**X**